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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/500,289	06/29/2004	Shunji Mackawa	042274	5211

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WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

SHAH, MANISH S

ART UNIT PAPER NUMBER

2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/18/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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Office Action Summary	Application No. 10/500,289	Applicant(s) MAEKAWA ET AL.	
	Examiner Manish S. Shah	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Terminal Disclaimer

1. The terminal disclaimer filed on 11/01/2006 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of any patent granted on Application Number 10/503,059 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (# US 5623296) in view of Breton et al. (# US 5484475) and Burr et al. (# EP 0739957 A1).

Fujino et al. discloses a sublimation transfer dyeing method including printing the ink on a sheet medium by inkjet printing; and heating the sheet medium to sublimate and transfer the sublimation dye onto an object to be dyed (see Abstract; figure: 1-15); wherein ink including water (see Examples), at least one sugar alcohol (column: 15, line: 45-55), a sublimation dye, which is dispersed dye in an amount from 0.2 to 12% by

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weight (column: 12, line: 45-67); a dispersant, which is selected from anionic surfactant, a nonionic surfactant and a high molecular surfactant in an amount from 0.1 to 20% by weight (column: 16, line: 60-67; column: 17, line: 1-25). They also disclose that the ink does not substantially includes a water-soluble organic solvent (see Examples). They also disclose that the sublimation dye is pulverized into fine particles and has an average particle size of less than 5 micrometer (column: 15, line: 5-15).

Fujino et al. differs from the claim of the present invention is that (1) the ink includes at least one sugar alcohol containing not less than four OH groups, which selected from D-sorbitol and maltitol in an amount of 0.5 to 50% by weight. (2) The ink including a compound expressed by the chemical formula $R-O-(CH_2CH_2O)_n-H$, wherein R is an alkyl group having a carbon number of 25 to 150 and n is from 2 to 100, and having HLB not less than 10 and an amount from 0.1 to 8% by weight.

Breton et al. teaches that to get the high quality print and rapid drying, inkjet ink composition includes a hot melt ink (sublimation) and Ethoxylate alcohols are the general formula $CH_3-(CH_2-CH_2)_x-CH_2-O-(CH_2-CH_2-O)_n-H$, wherein n is 2 to 41 (column: 7, line: 44-50), and having a HLB value 2 to 18 (i.e. Unithox 420, 450, 480, 520, 550, 720 and 750, which is same as the applicant disclose in page: 8 of specification) (column: 7, line: 57-65) and in an amount form 2 to 15% by weight (column: 8, line: 1-6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Fujino et al. by the aforementioned teaching of Breton et al. in order to have a rapid drying ink and high quality print.

Burr et al. teaches that to get the high quality printed image, an ink for inkjet recording including water (see Abstract); at least one sugar alcohol is sorbitol or maltitol having not less than four OH group (page: 2, line: 40-46). They also teach that the ink includes an amount of the sugar alcohol is from 1 to 20% by weight (page: 2, line: 45-47; see Examples).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Fujino et al. by the aforementioned teaching of Burr et al. in order to have a high quality printed image.

2. Claim 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujino et al. (# US 5623296) in view of Breton et al. (# US 5484475) and Burr et al. (# EP 0739957 A1) as applied to claims 1-10 above, and further in view of Hale et al. (# US 6450098).

Fujino et al., Breton et al. and Burr et al. discloses all the limitation of the method for producing the ink composition except that the sublimation dye is pulverized into fine particles and has an average particle size of 0.05 to 0.2 micrometer.

Hale et al. teaches that to prevent nozzle from clogging and get the high quality printed image, the ink for sublimation transfer inkjet recording comprising the sublimation dye is pulverized into fine particles and has an average particle size of 0.05 to 0.2 micrometer (not more than 0.2 micrometer) (column: 5, line: 10-20; column: 10, line: 65-67; column: 11, line: 1-5).

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It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink composition of Fujino et al. by the aforementioned teaching of Hale et al. in order to have a high quality printed image.

Conclusion

1. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on 10/06/2006 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

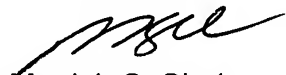
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Manish S. Shah
Primary Examiner
Art Unit 2853

MSS

1/9/07